**Reference Letter**

Dear Admissions Officer,

It is my pleasure to recommend Mr. Liu Shuo, one of my favorite students. As the best student with the high score of 99 in the exam of my Principles of Artificial Neural Networks course and the runner-up in my Experiments of Artificial Neural Networks course, he struck me as an industrious, smart, enthusiastic, and rigorous young man.

I recognize his initiative in and serious attitude towards professional study. To my knowledge, he maintained the habit of previewing new lessons so that he could find the difficult and key knowledge points in advance and attend classes with a focus. After class, his intellectual curiosity demonstrated itself when he proactively consulted me about the puzzles he summarized in class or during his self-learning. What also merit my praise are his fondness for comparing and summarizing the differences among similar knowledge points and his abilities to detect the flaws in the courseware of Experiments of Artificial Neural Networks. Although my courses raised high demands for students’ knowledge absorbing and independent exploration abilities, Mr. Liu acquitted himself well as an efficient learner who acquired a good knowledge of Deep Learning and Artificial Neural Networks through theoretical study and professional experiments.

I appreciate his rigor and sensitivity to details. As a keen thinker and observer, he was inclined to contemplate the adequacy and necessity of every proposition and consider the conditions for propositions while noticing the exceptional cases. I cannot forget how he performed when learning Convolutional Neural Networks (CNN). Based on realizing the requirements of our coursework, he used kinds of optimizers and loss functions to practice CNNs like DenseNet, ResNet,and ResNeXt, and assessed the performances of the optimizers and loss functions of every model. These have convinced me of his patience and circumspection, which I think would be instrumental in his postgraduate research.

Special attention should be given to his strong implementation and academic research abilities as well. He proved to be a reliable researcher by fulfilling the PyTorch re-implementation of Cycle GAN at a professional level and submitting a well-structured report on paper re-implementation. Furthermore, he led a team into the Kaggle Competition: Aerial Cactus Identification. So to speak, he, in persistent pursuit of progress, has always managed to embrace new challenges and improve himself.

In closing, I regard Mr. Liu as a qualified candidate with great potential for development and will become a valuable asset to your university the way he has been to mine. Thus, I recommend him without reservation.

Truly yours,

Ruixuan Wang

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